Bonian Daneshpajouhan
Institute

Desalination
& Water Solutions

Water is the most important component in the world.

Fresh water has only 2.5 percent share of total water resources. So water scarcity is going to shape the biggest challenge in the future.

We have to find a sustainable and intelligent way to deal with this problem.

Solutions | Producing fresh water from saline or brackish water as input water in desalination and advanced water treatment technologies could be a very good solution to manage water scarcity and it's severe effects on our world.

Solutions we offer

MED-TVC Process

The desalination process of MED-TVC is based on evaporation and condensation of sea Water under a high vacuum, this process takes place in many evaporators. These evaporators are often called effects or cells. Sea water is spread as thin film over the horizontal tubes installed inside the evaporators. This water is evaporated by heat transferred from the steam passing inside the tubes. The vapor inside the tubes transfers its thermal energy to sea water and is condensed. The evaporated sea water is then passed through demisters, to prevent carryover of salt. The pure steam then moves to the next effect and transfers heat to the sea water. The generated vapor in this effect is condensed inside the next effect tubes. The product water in each effect (distillate) is cumulated with the subsequent effects' distillate water. This process continues till the last effect. The vapor generated in the last effect is divided in two parts: A portion of it is sucked by thermo-compressor and after mixing with the input steam enters the first effect tubes. The other portion of it enters the condenser and is distillated by the inlet water passing through the condenser tubes.